

FIGURES 4(a), 4(b), 4(c) and 4(d) illustrate the magnitude of the frequency responses of the filters that implement cross-talk cancellation of the system of FIGURE 3 for four different spacings of a loudspeaker pair;

5 FIGURE 5 defines the geometry used to illustrate the effectiveness of cross-talk cancellation as the listener's head is moved to one side;

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FIGURES 6(a) to 6(m) illustrate amplitude spectra of the reproduced signals at a listener's ears, for different spacings of a loudspeaker pair;

10 FIGURE 7 illustrates the geometry of the loudspeaker-microphone arrangement. Note that θ is the angle spanned by the loudspeakers as seen from the centre of the listener's head, and that r_θ is the distance from this point to the centre between the loudspeakers;

FIGURES 8a and 8b illustrate definitions of the transfer functions, signals and filters necessary for a) cross-talk cancellation and b) virtual source imaging;

15 FIGURES 9a, 9b and 9c illustrate the time response of the two source input signals (thick line, $v_1(t)$, thin line, $v_2(t)$) required to achieve perfect cross-talk cancellation at the listener's right ear for the three loudspeaker spans θ of 60° (a), 20° (b), and 10° (c). Note how the overlap increases as θ decreases;

20 FIGURES 10a, 10b, 10c and 10d illustrate the sound field reproduced by four different source configurations adjusted to achieve perfect cross-talk cancellation at the listener's right ear at (a) $\theta = 60^\circ$, (b) $\theta = 20^\circ$, (c) $\theta = 10^\circ$, and (d) for a monopole-dipole combination;

25 FIGURES 11a and 11b illustrate the sound fields reproduced by a cross-talk cancellation system that also compensates for the influence of the listener's head on the incident sound waves. The loudspeaker span is 60° . FIGURE 11a plots are equivalent to those shown in FIGURE 10a. FIGURE 11b is as FIGURE 11a but for a loudspeaker span of 10° . In the case of FIGURE 11b, the illustrated plots are equivalent to those shown by
30 FIGURE 10c;